

Local Hazard Mitigation Plan Annex City of Richmond, California

Introduction:

The City of Richmond is a moderately sized city located 16 miles north east of San Francisco, on a peninsula separating San Francisco Bay and San Pablo Bay, in Contra Costa County, California. The City has a population of 102,553 people, based on the July 01, 2002 census estimate, 2000 census shows 99,216¹. The City's total adopted budget for fiscal year 2004/2005 was \$193,715,023.

The City of Richmond is a full service city. It employs 721 people, 664 full time and 57 part-time, with a full service Police Department and Fire Department, including its own hazardous materials response branch.

The Planning Process:

This process of preparing this plan was familiar to the City of Richmond. The City has a Safety Element Section to its General Plan which was last updated August 1994. This General Plan includes discussion of nine elements: Land Use, Circulation, Community Facilities, Economic Development, Growth Management, Housing, Noise, Open Space and Conservation, and Safety. The Safety Element addresses earthquake hazards, tsunami, dam failure, slope instability leading to mudslides and landslides; subsidence and other geological hazards, flooding and fires. In addition, the City routinely enforces the requirements of the California Environmental Quality Act (CEQA) requirements (which, since 1988, have required mitigation for identified natural hazards). The City's effort has focused on building on these pre-existing programs and identifying gaps that may lead to disaster vulnerabilities in order to work on ways to address these risks through mitigation.

Many of the activities conducted by the City were fed into the planning process for the multi-jurisdictional plan. The City participated in various ABAG workshops and meetings, including the general "kick-off" meeting. In addition, the City has provided written and oral comments on the multi-jurisdictional plan. Finally, the City provided information on facilities that are viewed as "critical" to ABAG.

Key City staff met to identify and prioritize mitigation strategies appropriate for the City. Staff involved in these meetings included representatives from Public Safety (Police, Fire, and Office of Emergency Services), Public Services (Administration, Engineering, Facilities, Field Services, Transportation, and Waste Water), Community Development (Building, Planning, and Housing), Human Resources, Information Technology, Parks, Recreation, Port and Finance. Prior to the first meeting the general priorities and appropriate City departments were identified. During subsequent meetings each mitigation strategy was reviewed in the light of general priorities and existing programs,

¹ For complete Census information on this city, see <http://www.bayareacensus.ca.gov/>.

preliminary budgets as well as potential funding sources for strategies of specific interest.

The City will provide the opportunity for the public to comment on the DRAFT mitigation strategies selected by City staff at the City Council meeting on December 20, 2005. The resolution adopting the plan and strategies was on the City Council agenda on December 20, 2005. The mitigation strategies will become an implementation appendix to this Emergency Operations Plan (EOP).

Hazard and Risk Assessment:

The ABAG multi-jurisdictional Local Hazard Mitigation Plan, to which this is an Annex, lists nine hazards that impact the San Francisco Bay Area, five related to earthquakes (faulting, shaking, earthquake induced landslides, liquefaction and tsunamis), and four related to weather (flooding, landslides, wildfires and drought). The impact of tsunamis is currently unknown. The current tsunami Evacuation Planning Maps do now show a hazard in the City of Richmond, this is because the area has not been mapped. Researchers are currently examining the impact of tsunamis in the East Bay. No further work on the tsunami hazard is possible until the maps are completed and published.

While the City has undertaken a number of general hazard mapping activities since the first Emergency Operations Plan was prepared by the City, all of these maps are less detailed and are not as current as those shown on the ABAG website at <http://quake.abag.ca.gov/mitigation/>.

Information on disasters declared in Contra Costa County is at <http://quake.abag.ca.gov/mitigation/disaster-history.html>.

The City examined the hazard exposure of City urban land based on the information on ABAG's website at <http://quake.abag.ca.gov/mitigation/pickdbh2.html>. Of the 13,894 urban acres in the City:

- ◆ Earthquake faulting - 281 acres are within the California Geological Survey under the Alquist-Priolo Earthquake Fault Zoning Act (active Hayward fault runs through the City);
- ◆ Earthquake shaking - 11,110 acres are in the highest two categories of shaking potential;
- ◆ Earthquake induced landslides – The California Geological Survey has not completed mapping of this hazard,
- ◆ Liquefaction - 3,331 acres are in the high and very high categories for liquefaction susceptibility;
- ◆ Tsunamis – While tsunamis may be a hazard in the City of Richmond, the mapping has not been completed at this time;
- ◆ Flooding – 442 acres are in the 500 year flood plain and 1,365 acres are in the 100 year plain;
- ◆ Dam Inundation – 4,874 acres are subject to dam inundation;
- ◆ Landslides - 1,227 acres are in areas of existing landslides;

- ◆ Wildfires – 914 acres are in the high and very high threat wildfire threat categories, and 5,379 acres are within the wildland urban interface fire threat category; and
- ◆ Drought – All 13,894 acres are subject to drought.

The City also examined the hazard exposure of infrastructure based on the information on ABAG's website at <http://quake.abag.ca.gov/mitigation/pickdbh2.html>. Of the 402,724 acres of roads, highways and related facilities in the City,

- ◆ Earthquake shaking – 2,176 acres are in the highest two categories of shaking potential;
- ◆ Earthquake induced landslides – the California Geological Survey has not completed mapping of this hazard;
- ◆ Earthquake liquefaction – 1,770 acres of roads, highways and related facilities are in areas of moderate, high or very high liquefaction susceptibility;
- ◆ Tsunamis – The mapping of the inundation area has not been completed at this time;
- ◆ Flooding – 120 acres are within the 500 year plain while 222 acres are within the 100 year flood plain;
- ◆ Landslides - 712 acres are in a low category and 133 acres are designated as a high category for existing landslides;
- ◆ Wildfires – 10 acres are within the very high wildfire threat category, and 887 acres are within the wildland urban interface fire threat areas;
- ◆ Dam Inundation – 1,081 acres are within the dam failure inundation threat area;
- ◆ Drought – Drought is not a roadway hazard.

Finally, the City examined the hazard exposure of critical health care facilities, schools, and city-owned buildings based on the information on ABAG's website at <http://quake.abag.ca.gov/mitigation/pickcrit.html>. Of the 157 critical facilities, 56 critical facilities are owned by the City of Richmond,

- ◆ Earthquake faulting – one building is within the California Geological Study Zone;
- ◆ Earthquake shaking – 48 city owned critical facilities are within the highest two categories of shaking potential, as well as 8 health care facilities, 26 schools, and 44 bridges and interchanges;
- ◆ Earthquake induced landslides – the California Geological Survey has not completed mapping of this hazard;
- ◆ Earthquake liquefaction – 49 city owned facilities are within the moderate, high or very high susceptibility categories, as well as 5 health care facilities in the moderate category, 19 school facilities in the moderate to very high category, and 45 bridges and interchanges in the moderate to very high categories;
- ◆ Tsunamis – The mapping of the inundation area has not been completed at this time;

- ◆ Flooding – 3 City owned critical facilities are within the 500 year flood plain, as well as 2 bridges and interchanges in the 500 year plain and 2 in the 100 year flood plain, there are no critical health care facilities or schools in either the 100-year flood plain or in other high hazard flood-prone areas.
- ◆ Landslides – 19 government facilities, 6 health care and 11 school facilities are within the highest two areas of existing landslides;
- ◆ Wildfires – One city facility is in the very high wildfire threat, and 82 acres in wildland urban interface fire threat area;
- ◆ Dam Inundation – 19 city owned critical facilities are within the dam failure inundation area, as well as 4 health care facilities, 16 schools and 17 bridges and interchanges;
- ◆ Drought will not affect city buildings. The city does not operate a water supply distribution system,
- ◆ Repetitive Flood Loss – Of the 7 total properties, 2 are in the 100 year flood plain, 3 are in the 500 year flood plain and 2 are outside of the flood plain, there have been 15 claims for a total of \$164,061.00. This is based on the information at <http://quake.abag.ca.gov/mitigation/pickflood.html>.

The City plans to work with ABAG during 2005 to improve the risk assessment information being compiled by ABAG by providing information on unreinforced masonry buildings and soft-story apartments located in the City.

Drought, though a potential problem, is not fully assessed. The City will work with ABAG and various water supply agencies on this issue.

The City plans to work with ABAG to develop specific information about the kind and level of damage to buildings, infrastructure, and critical facilities which might result from any of the hazards previously noted. The ABAG Annex states that ABAG will be doing this work in 2005 through early 2006.

As these impacts are not fully developed, the City has reviewed the hazards identified and ranked the hazards based on past disasters and expected future impacts. The conclusion is that earthquakes (particularly shaking), flooding, hazardous materials, wildfire, and landslides (including unstable earth) pose a significant risk for potential loss.

Mitigation Activities and Priorities:

As a participant in the ABAG multi-jurisdictional planning process, City of Richmond staff helped in the development and review of the comprehensive list of mitigation strategies in the overall multi-jurisdictional plan. The list was discussed at a meeting of the City Police Chief, Building Official, Public Works Director, Planning Director, and Assistant City Manager on August 10, 2005. At the meeting, all of the mitigation strategies were reviewed. The tentative decision on priority was made based on a variety of criteria, not simply on an economic cost-benefit analysis. These criteria

include being technically and administratively feasible, politically acceptable, socially appropriate, legal, economically sound, and not harmful to the environment or our heritage.

Over time, we are committed to developing better hazard and risk information to use in making those trade-offs. We are not trying to create a disaster-proof region, but a disaster-resistant one. In addition, several of the strategies are existing City programs.

These draft priorities were submitted to the City Manager for review. The draft priorities were provided to the City Council in December 2005. The public was provided with an opportunity to comment on the DRAFT priorities. The final strategies (as shown in the attached Table) will become an *Implementation Appendix* to the City's Emergency Operations Plan.

In addition, the City examined the hazard exposure information to City-owned critical facilities supplied by ABAG. Please refer to the critical facilities discussion page 3.

The Plan Maintenance and Update Process:

The City of Richmond is committed to complying with Disaster Mitigation Act of 2000 and plan to review and update this plan annex at least once every five years as required. The City's Planning Director will contact ABAG four years after this plan is approved to ensure that ABAG plans to underrate the plan update process. If so the City will work with ABAG to complete that process. If ABAG is unwilling or unable to act as the lead agency, in the multi-jurisdictional effort, other agencies including the Contra Costa County Office of Emergency Services will be contacted and will work together to identify another forum to complete the process.

The City of Richmond Planning Director will ensure that **monitoring** of this Annex will occur on an on-going basis. Also, any major disasters affecting our community, legal changes, notices from ABAG as the lead agency in this process, and other triggers will be used, and updates and revisions made accordingly as needed. Finally, the Annex will be a discussion item on the agenda of the Department Heads meeting at least once a year in April. At that meeting, the department heads will focus on **evaluating** the Annex in light of technological and political changes during the past year, incidents which may have occurred, or other significant events. This group will be responsible for determining if the plan should be updated.

The **public** will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the City will provide the opportunity for the public to comment on the updates. A public notice will be posted according to city policy prior to the meeting to announce the comment period and meeting logistics.